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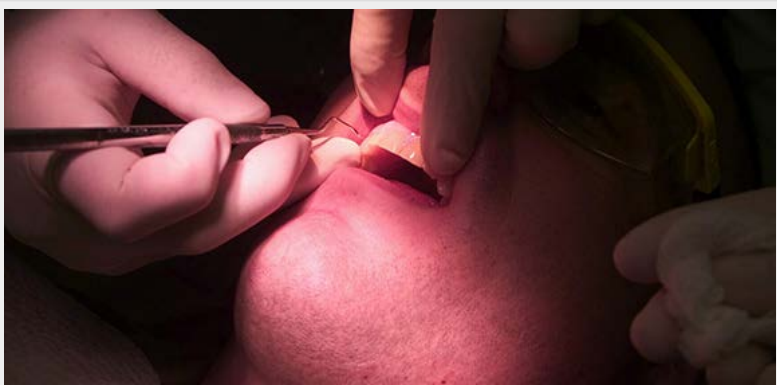
Written on AUGUST 19, 2014 AT 6:00 AM by SVANDERWERFF

Proud Tradition of Dental Corps

Filed under [FORCE HEALTH AND SAFETY](#), [HEATH](#), [RESEARCH AND DEVELOPMENT](#)

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Story by Capt. Jonathan Stahl, DDS, Ph.D, Naval Medical Research Unit – San Antonio (NAMRU-SA)



In times of peace and conflict, Dental Corps officers along with dental assistants, hygienists, and auxiliaries have steadfastly helped assure our nation has a medically ready fighting force.

On August 22nd the Navy Dental Corps will celebrate its 102nd anniversary. Today’s Dental Corps has a proud heritage and a commitment to providing high quality and compassionate patient care while maintaining an optimal state of operational dental readiness.

Presently, there are more than 1,400 active-duty and reserve Dental Officer’s serving on a

variety of platforms including ships, Marine Corps bases, Navy Mobile Construction Battalions, overseas and shore facilities. Further, from World War I through the more recent operations in Iraq and Afghanistan, Dental Corps personnel have served admirably as part of forward deployed missions to maintain the combat readiness of front line forces. In times of peace and conflict, Dental Corps officers along with dental assistants, hygienists, and auxiliaries have steadfastly helped assure our nation has a medically ready fighting force.

The proud history of the Dental Corps extends beyond their vital clinical role, as they have also excelled in conducting world class research. The Navy dental research facility was initially established in 1947 at



Left to right, Dr. John Simecek,

Navy Medicine Video

Navy Medicine is a global healthcare network of 63,000 Navy medical personnel around the world who provide high quality health care to more than one million eligible beneficiaries. Navy Medicine personnel deploy with Sailors and Marines worldwide, providing critical mission support aboard ship, in the air, under the sea and on the battlefield.

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February 2015 (4)

January 2015 (12)

December 2014 (17)

November 2014 (11)

Great Lakes, Illinois to address dental and operational healthcare needs of the military and continues today at the Naval Medical Research Unit – San Antonio (NAMRU-SA). The role of Navy dental research expanded over the years to focus on addressing dental and biomedical problems that increase operational readiness, addressing emergent dental problems, and providing data to improve management of the Dental Corps.

Cmdr. David Leal, Capt.
Jonathan Stahl.



Here I am analyzing Optical Coherence Tomography (OCT) images to evaluate cracks in teeth.

Currently, the Craniofacial Health and Restorative Medicine Directorate at NAMRU-SA is composed of three departments whose research efforts remain aimed at having a positive impact on the health and readiness of Sailors and Marines through treatment, detection, and prevention of craniofacial disease and injuries.

As Maxillofacial Injury and Disease Department Head I oversee ongoing projects that include exploring the use of optical coherence tomography (OCT) to detect tooth cracks. OCT is analogous to ultrasonic imaging, but measures the intensity of reflected infrared light rather than sound waves. Researchers in the department are working to develop a novel nano-fibrous wound dressing that releases growth factors, and may improve healing while reducing facial scarring.

A project is also underway, to develop a novel treatment for periodontal disease using genetically modified bacteriophages to target oral pathogens. Further, researchers are developing a new treatment for multi-drug resistant maxillofacial infections that will serve as an alternative to conventional antibiotics. This project utilizes laser irradiation combined with energy absorbing gold nanoparticles to create opto-acoustic effects that will decrease bacterial biofilm viability.

Cmdr. David A. Leal, DDS, is the Biomaterials and Environmental Surveillance Department

Head. Currently, researchers are working to develop a novel composite resin loaded with titanium nanoparticles to prevent new, and recurrent dental caries around fillings. As the lead for Navy mercury abatement efforts, scientists research novel means to reduce release of mercury and other contaminants into public wastewater systems. Efforts include improving the efficiency of the dental chairside filter previously patented by the Navy.

Dr. John W. Simecek, DDS, MPH, is the director of Epidemiology and Biostatistics. Here, the distributions of oral, dental, and craniofacial diseases and injuries occurring in sailors and Marines while deployed or in garrison are assessed in an effort to reduce the rate of dental emergencies.

From the research bench, to chairside, to the field, Navy Dentists have contributed significantly to the



Cmdr. David Leal and Mr. Eric Botts, Jr. flush an amalgam chair side separator to characterize dental wastewater.

October 2014 (15)
September 2014 (20)
August 2014 (14)
July 2014 (13)
June 2014 (8)
May 2014 (11)
April 2014 (9)
March 2014 (14)
February 2014 (7)
January 2014 (7)
December 2013 (7)
November 2013 (12)
October 2013 (7)
September 2013 (14)
August 2013 (13)
July 2013 (11)
June 2013 (22)
May 2013 (15)
April 2013 (14)
March 2013 (14)
February 2013 (14)
January 2013 (12)
December 2012 (11)
November 2012 (11)
October 2012 (7)
September 2012 (9)
August 2012 (12)
July 2012 (13)
June 2012 (17)
May 2012 (22)
April 2012 (14)
March 2012 (13)
February 2012 (14)
January 2012 (13)
December 2011 (13)
November 2011 (20)
October 2011 (22)
September 2011 (12)
August 2011 (16)

Navy and Marine Corps mission. On this 102nd birthday of the Dental Corps, we recognize the honor, courage, and commitment of this proud component of the Navy and celebrate their many accomplishments.

July 2011 (10)

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